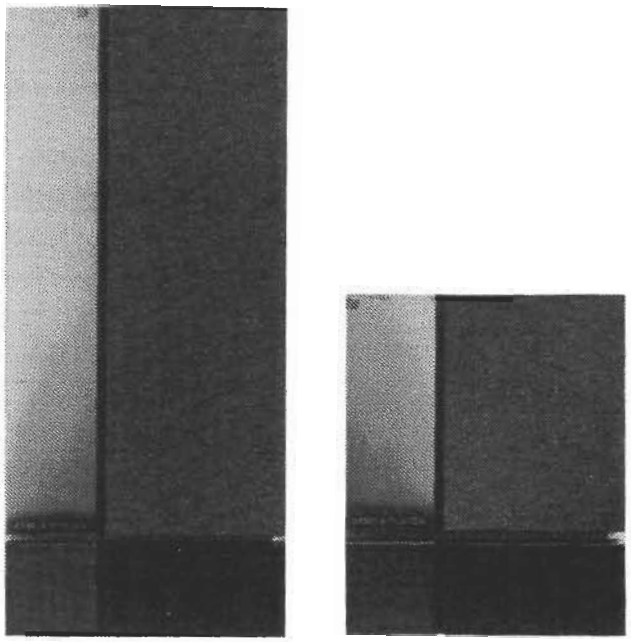
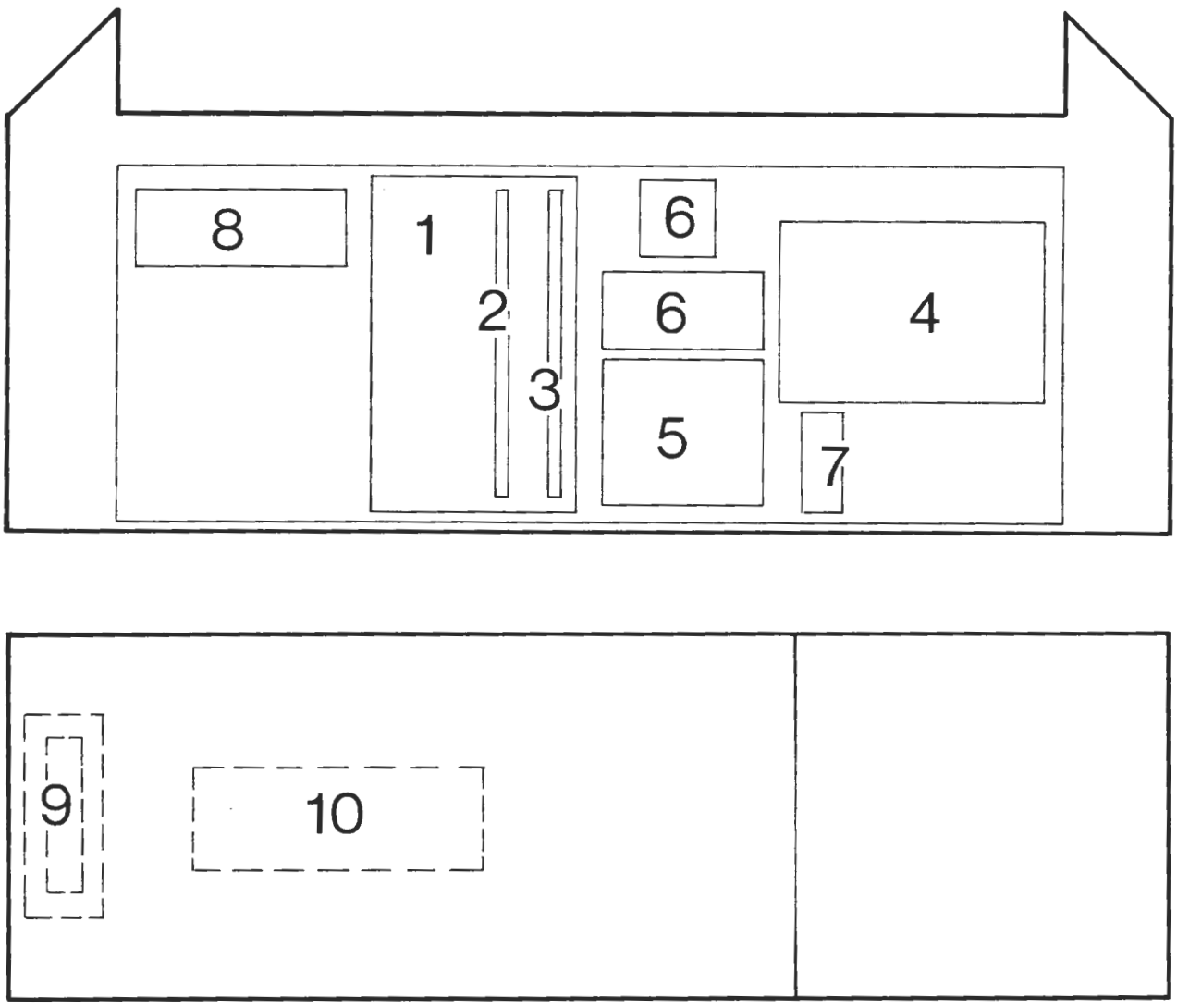
1 Power Supply
2 System Control
3 Microprocessor
4 Output Amplifier
5 Switch
6 Input Socket
7 NTC
8 Transformer
9 Stand by
10 Display
11 Crossover Network





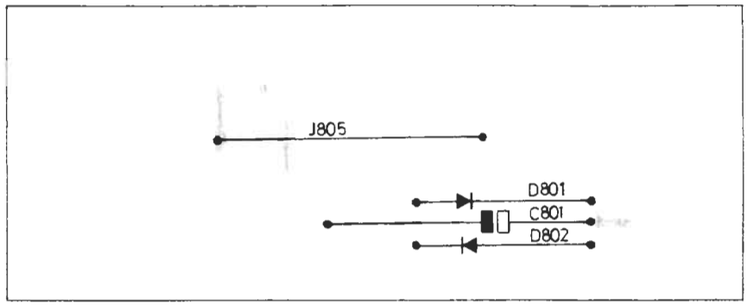
Bang & Olufsen

TECHNICAL SPECIFICATIONS	BEOVOX 3000	BEOVOX 5000
Type	6716	6706
Dimensions W x H x D/Weight	45 x 38 x 8 cm/5 kg	45 x 85 x 8 cm/11 kg
	BEOLAB 3000	**BEOLAB 5000**
Type	6711-6712-6713-6714-6715	6701-6702-6703-6704-6705
Dimensions W x H x D/Weight	45 x 54 x 8 cm/9 kg	45 x 101 x 8 cm/15 kg
Long-term maximum input power	90 watts	120 watts
Maximum noise power	45 watts	60 watts
Impedance	8 ohms	8 ohms
Frequency range +4 -8 dB	75-20,000 Hz	60-20,000 Hz
Power at 94 dB SPL	5 watts	3.2 watts
Sensitivity 1 W	87 dB	89 dB
Distortion 250-6000 Hz	<1%	<0.2%
Cabinet principle	Bass Reflex	Bass Reflex
Woofer	5"-13 cm	2 units 5"-13 cm
Tweeter	1"-2.5 cm	1"-2.5 cm
Crossover frequency	3500 Hz	3500 Hz
Net. volume	5.4 litres	14 litres
POWER AMPLIFIER		
Long-term maximum output power	90 watts	90 watts
Harmonic distortion THD	<0.1%/55 watts 20-20,000 Hz	<0,1%/55 watts 20-20,000 Hz
Frequency range +0 -1 dB	40-20,000 Hz	40-20,000 Hz
Signal-to-noise ratio:		
A-weighted 1W	>80 dB	>80 dB
A-weighted max. power	>97 dB	>97 dB
Input sensitivity/impedance:		
Power Link sockets	1 V/47 kohms	1 V/47 kohms
Power Link channel separation	>66 dB	>66 dB
Speaker Link socket	11.3 – 16 – 22 V/>47 kohms	11.3 – 16 – 22 V/>47 kohms
Phono plug	1 V/33 kohms	1 V/33 kohms
Dynamic Bass Equalizer	4-0 dB	4-0 dB
Channel switch	L-R	L-R
Stand by function	Automatic or Manual ON-OFF	Automatic or Manual ON-OFF
Power supply	220 (100-120-240) volts	220 (100-120-240) volts
Power consumption	Max. 130 watts	Max. 130 watts
Stand by	2.6 watts	2.6 watts

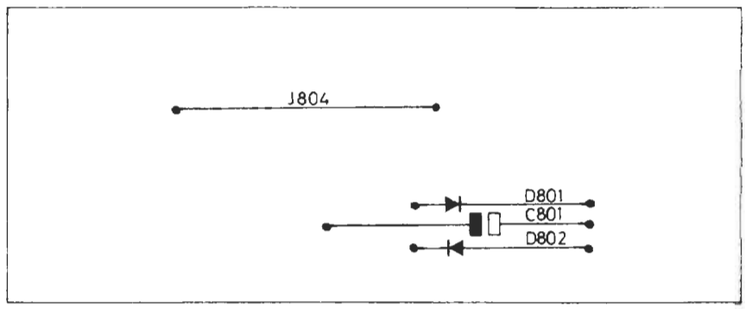
Subject to change without notice

Wiring of Mains Transformer

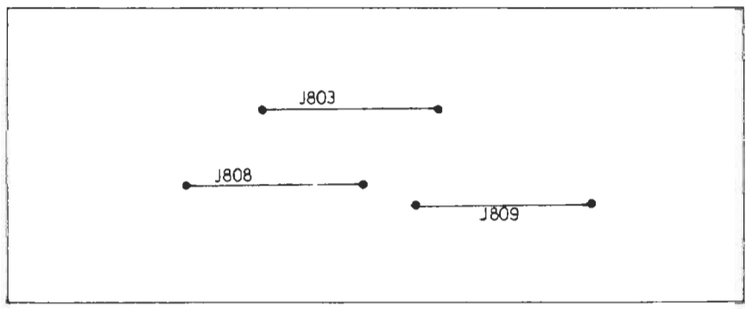
220V
Type 6701-6711



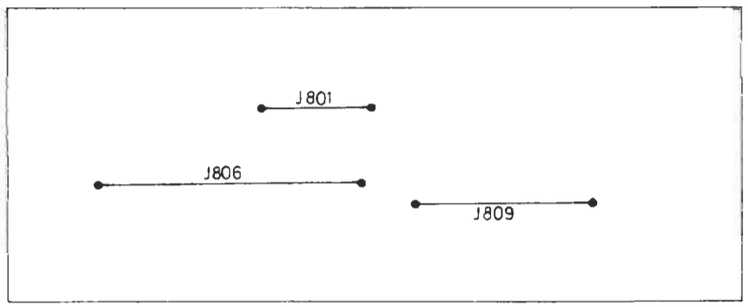
240V
Type 6702-6712 (GB)
Type 6705-6715 (AUS)



120V
Type 6703-6713 (US)



100V
Type 6704-6714 (JAP)



2-1

DIAGRAMFORKLARING

På diagrammerne er der angivet typenumre på transistorer og IC'er. Hvis positionsnummeret er efterfulgt af en stjerne, skal reservedelsnummeret altid benyttes, da denne komponent er specielt udvalgt, f.eks. TR102*.

Styrekredsløb

I visse styrekredsløb er den aktive tilstand angivet med en funktions- eller bogstavsangivelse. Denne kan eksempelvis være $\overline{\text{ST.BY.}}$ = »low« i stand-by-stilling eller ST.BY. = »high« i stand-by-stilling.

Forsyningsspændinger

Alle forsyningsspændinger i diagrammerne er angivet med en pil og en spændingsangivelse.

Eksempel:
Ved siden af spændingsangivelsen står der f.eks. 7 CON. Dette betyder, at den pågældende forsyningsspænding går til 7 steder på den pågældende diagramside (7 CON. = 7 connections).

EXPLANATION OF DIAGRAM

Type numbers of transistors and ICs are indicated on the diagrams.
If the position number is followed by an asterisk the spare part number must always be used because the component in question has been specially selected, e.g. TR102*.

Control Circuit

In certain control circuits the active mode is indicated by a function term or by an abbreviation. This may be e.g. $\overline{\text{ST.BY.}}$ = low in the stand-by mode or ST.BY. = high in the stand-by mode.

Supply Voltages

All supply voltages in the diagrams are indicated by an arrow and a voltage indication.

Example:
"7 CON.". This means that the supply voltage in question goes to 7 different places on the diagram page in question (7 CON = 7 connections).

SYMBOL FOR SIKKERHEDSKOMPONENTER

Ved udskiftning af komponenter med dette symbol skal der anvendes komponenter med samme reservedelsnummer. Den nye komponent skal monteres på samme måde som den udskiftede.

SYMBOL OF SAFETY COMPONENTS

When replacing components with this symbol, components with identical part numbers must be used. The new component must be mounted in the same way as the one replaced.

MÅLEBETINGELSER

Alle DC-spændinger er målt i forhold til stel med et voltmeter med en indgangsmodstand på 10 Mohm.

DC-spændingerne er opgivet i volt (V), f.eks. 0,7 V.

MEASURING CONDITIONS

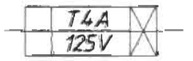
All DC voltages have been measured in relation to ground with a voltmeter with an input resistance of 10 Mohms.

The DC voltages are stated in volts (V), e.g. 0.7 V.

EXPLANATION DE SYMBOLES DU FUSIBLE UTILISES DANS L'APPAREIL

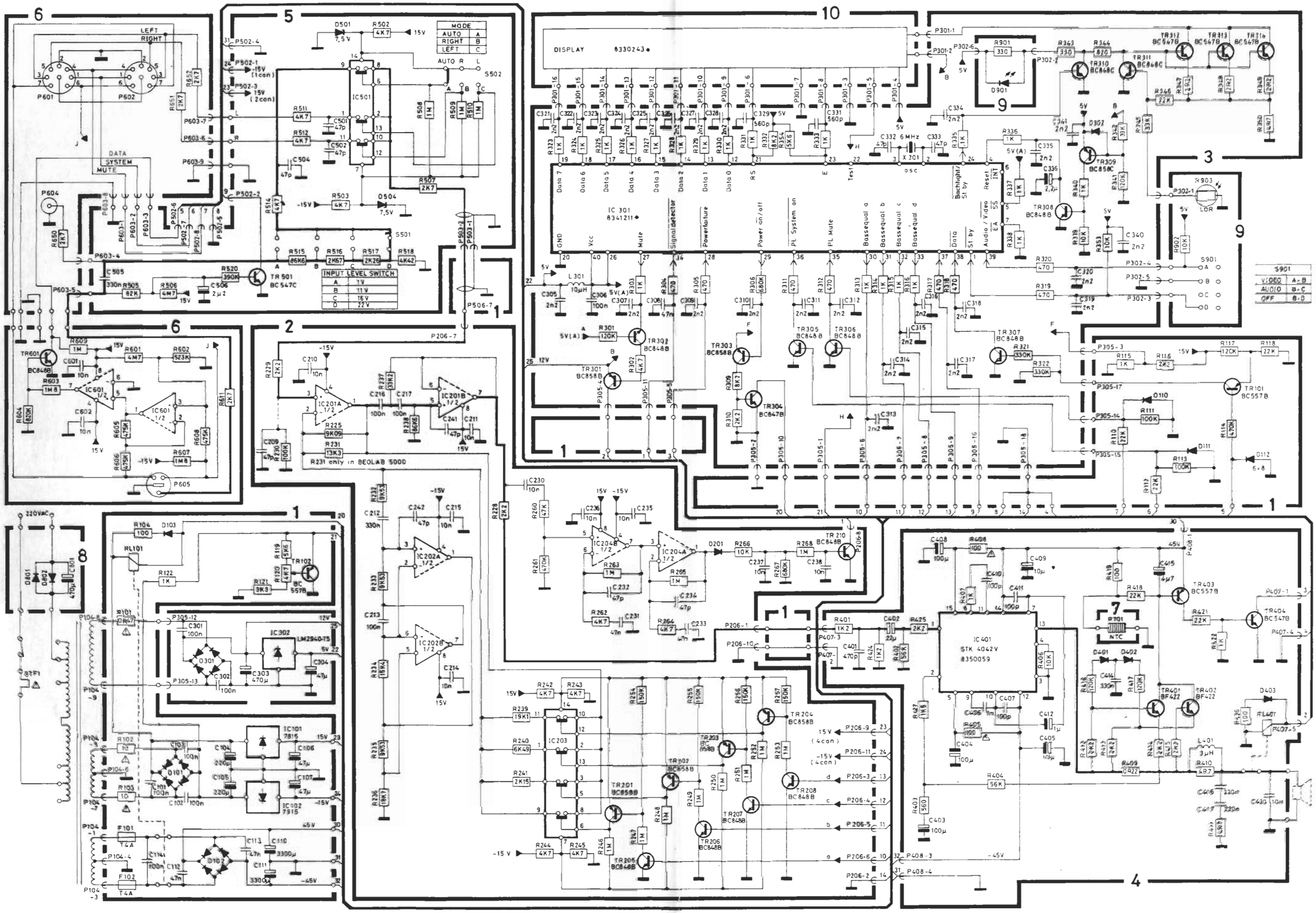
Remplacer par un fusible retardé de la même type et de 4 ampères 125 volts.

EXPLANATION OF THE FUSE SYMBOLS USED IN THE SET



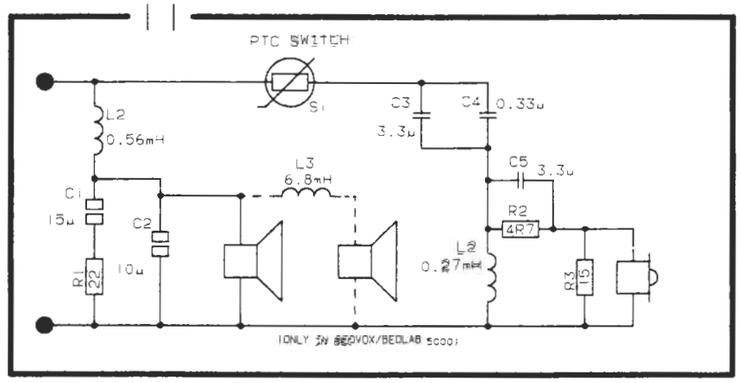
Replace with the same type of 4 amperes 125 volts slow acting fuse.

DIAGRAM

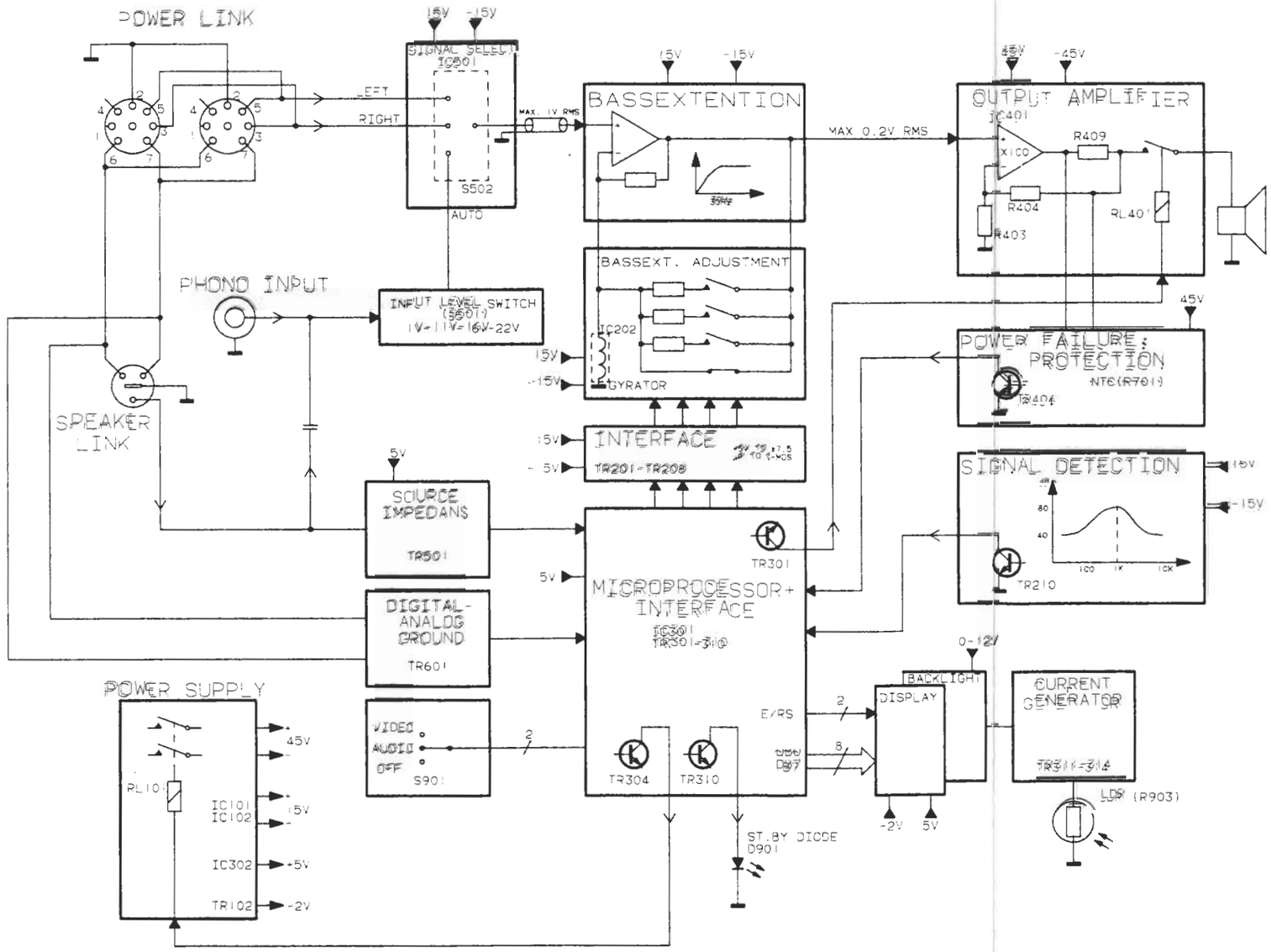

DISPLAY 8330243
IC 301 8341211
IC 201 8341211
IC 401 STK 4042V 8350059
X 301 6 MHz
LDR
S501
S502
S901
P601
P602
P604
P605
P206-7
P301-1
P301-2
P302-1
P302-2
P302-3
P302-4
P302-5
P302-6
P305-3
P305-14
P305-15
P305-17
P305-18
P408-1
P408-3
P408-4
P407-1
P407-2
P407-3
P407-4
P407-5
P206-1
P206-10
P206-2
P206-3
P206-4
P206-5
P206-6
P206-9
P206-11
P104-1
P104-3
P104-4
P104-6
P104-7
P104-8
P104-9
P305-12
P305-13
INPUT LEVEL SWITCH
A 1V
B 11V
C 16V
D 22V
MODE
AUTO A
RIGHT B
LEFT C
S901
VIDEO A-B
AUDIO B-C
OFF B-D
TR101 BC557B
TR102 BC 557B
TR201 BC858B
TR202 BC858B
TR203 BC858B
TR204 BC858B
TR205 BC848B
TR206 BC848B
TR207 BC848B
TR208 BC848B
TR210 BC848B
TR301 BC858B
TR302 BC848B
TR303 BC858B
TR304 BC847B
TR305 BC848B
TR306 BC848B
TR307 BC848B
TR308 BC848B
TR309 BC858C
TR310 BC848C
TR311 BC848C
TR312 BC547B
TR313 BC547B
TR314 BC547B
TR401 BF422
TR402 BF422
TR403 BC557B
TR404 BC547B
TR501 BC547C
TR601 BC848B
IC101 7815
IC102 7915
IC201A 1/2
IC201B 1/2
IC202A 1/2
IC202B 1/2
IC203
IC204A 1/2
IC204B 1/2
IC302 LM2940-T5
IC601 1/2
L301 10µH
L401 3µH
RL101
RL401
F101 T4A
F102 T4A
D101
D102
D103
D201
D301
D401
D402
D403
D501
D504
D901
D902
D907
D110
D111
D112
6.8
STF1
220VAC
R231 only in BEOLAB 5000

2-3

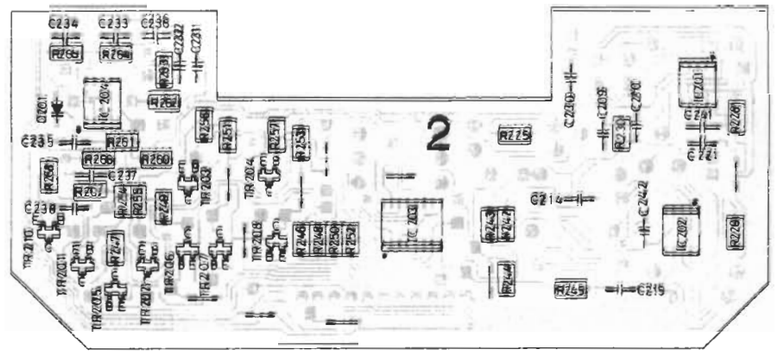
Crossover network



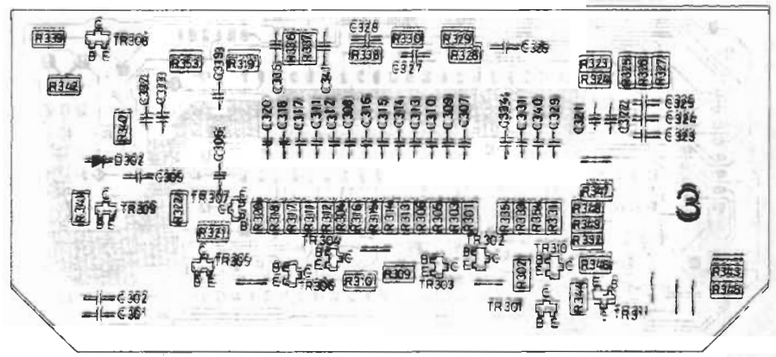
Blockdiagram



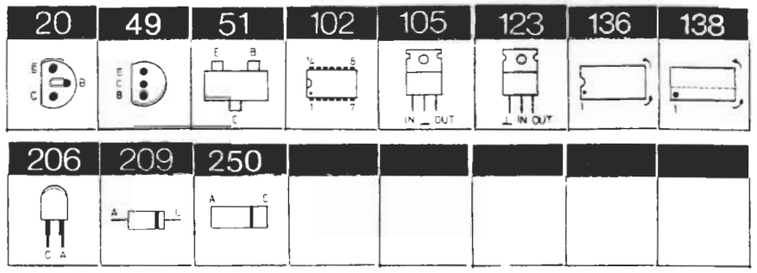
PCB 2, System Control



PCB 3, Microprocessor



LIST OF ELECTRICAL PARTS



Resistors not referred to are standard, see page 3-2

PCB 1, 8001037 Power Supply

IC101	8340064	**105**	LM 340T-15
IC102	8340240	**123**	MC 7915 CT

TR101-102	8320503	**20**	BC 557B

D101	8300466		B125 C1500	D110-111	8300058	**209**	1N 4148
D102	8300487		KBU 6D				
D103	8300058	**209**	1N 4148	D112	8300154	**209**	ZPD 6.8V

R101	5020684	0.47 Ω 10% 0.4W
R102-103	5020489	10 Ω 10% 0.3W
R120	5370324	4.7 kΩ 20% 0.1W

C101-103	4130230	100 nF 20% 63V	C110-111	4200799	3300 µF 20% 50V
C104-105	4200311	220µF -10-100% 40V	C112-113	4130087	47 nF 10% 250V
C106-107	4201087	47 µF -10+100% 40V	C114	4130103	100 nF 20% 250V

RL101	7600069	Relay 24V

F101-102	6600068	Fuse 4AT f/6701-02-05-11-12-15
F101-102	6600094	Fuse 4AT f/6703-04-13-14
	7200085	Socket

P104	7220743	Plug 9/8 pole
P105	7220321	Plug 18/18 pole
P106	7220250	Plug 11/11 pole

PCB 2, 8001033 System Control

IC201-202	8341022	**138**	4558	IC203	8341024	**138**	4066
				IC204	8341022	**138**	4558

TR201-204	8320616	**51**	BC 858B	TR210	8320615	**51**	BC 848B
TR205-208	8320615	**51**	BC 848B				

D201	8300482	**250**	LL 4148

R225	5021023	9.09 kΩ 1% 1/4W	R236	5020034	18.7 kΩ 1% 1/4W
R231	5020095	13.3 kΩ 1% 1/4W	R237	5020083	33.2 kΩ 1% 1/4W
R232-233	5020229	9.53 kΩ 1% 1/4W	R238	5020099	86.6 kΩ 1% 1/4W
			R239	5020337	19.1 kΩ 1% 1/4W
R234	5020343	15.4 kΩ 1% 1/4W	R240	5020590	6.49 kΩ 1% 1/4W
R235	5020229	9.53 kΩ 1% 1/4W	R241	5020764	2.15 kΩ 1% 1/4W

C209	4000293	47 pF 5% 50V		C230	4010176	10 nF -20+80% 50V	
C210-211	4010176	10 nF -20+80% 50V		C231	4010209	47 nF 10% 50V	
				C232	4000293	47 pF 5% 50V	
C212	4130309	330 nF 10% 63V		C233	4010209	47 nF 10% 50V	
C213	4130261	100 nF 5% 63V		C234	4000293	47 pF 5% 50V	
C214-215	4010176	10 nF -20-80% 50V		C235-238	4010176	10 nF -20+80% 50V	
C216-217	4130261	100 nF 5% 63V		C241-242	4000293	47 pF 5% 50V	

PCB 3, 8001032 Microprocessor

IC301*△	8341211 3302423	**136**	80C50 Screen	IC302	8341163	**105**	LM 2940CT-5

TR301	8320616	**51**	BC 858B	TR309	8320778	**51**	BC 858C
TR302	8320615	**51**	BC 848B	TR310-311	8320747	**51**	BC 848C
TR303	8320616	**51**	BC 858B				
TR304	8320755	**51**	BC 847B	TR312-314	8320497	**20**	BC 547B
TR305-308	8320615	**51**	BC 848B				

D301	8300466		B125 C1500				
D302	8300482	**250**	LL 4148				

C301-302	4010166	100 nF -20+80% 50V		C329	4000325	560 pF 5% 50V	
				C331	4000325	560 pF 5% 50V	
C303	4200522	470 µF -20+50% 16V		C332-333	4000293	47 pF 5% 50V	
C304	4201087	47 µF -10+100% 40V					
C305	4010170	2.2 nF 10% 50V		C334-335	4010170	2.2 nF 10% 50V	
C306	4010166	100 nF -20+80% 50V					
C307	4010170	2.2 nF 10% 50V		C336	4200517	2.2 µF 20% 50V	
C308	4010209	47 nF 10% 50V		C340-341	4010170	2.2 nF 10% 50V	
C309-328	4010170	2.2 nF 10% 50V					

L301	8020552	Coil 10 µH 10%			
X301	8090009	Crystal 6.0 MHz			
P301	7210723	Socket 16 pole	P305	7210110	Socket 11/11 pole
P302	7220470	Plug 6 pole	P315	7210289	Socket 7/7 pole

PCB 4, 8001034 Output Amplifier

IC401	8350059		STK4042V				
TR401-402	8320505	**49**	BF 422	TR403	8320503	**20**	BC 557B
				TR404	8320497	**20**	BC 547B
D401-403	8300058	**209**	1N 4148				

R405	5020159	100 Ω 10% 0.3W	R410-411	5010765	4.7 Ω 5% 1/2W
R408	5020159	100 Ω 10% 0.3W			
R409	5100302	0.22 Ω 10% 2W			

C401	4010128	470 pF 10% 63V	C410	4000243	100 pF 5% 63V
C402	4200672	22µF 20% 16V	C411	4000292	100 pF 5% 50V
C403	4200129	100µF -20+50% 16V	C412	4200512	1 µF 20% 50V
C404	4200368	100µF -10+100% 63V	C414	4130236	330 nF 20% 63V
C405	4000342	10 µF -10+50% 63V	C415	4200515	4.7 µF 20% 25V
C406	4010132	1 nF 10% 50V	C416-417	4130233	220 nF 20% 63V
C407	4000292	100 pF 5% 50V			
C408	4200368	100µF -10+100% 63V	C420	4130109	10 nF 10% 250V
C409	4200342	10 µF -10+50% 63V			

L401	6850165	Coil 3 µH			
RL401	7600095	Relay 12V			
P407	7220469	Plug 5 pole	P408	7220793	Plug 4/3 pole

△indicates that static electricity may destroy the component

*Specially selected or adapted sample

PCB 5, 8001039 Switch

IC501△	8340202	**102**	MC 14066 BCP				
TR501	8320679	**20**	BC 548C				
D501	8300496	**209**	ZPD 7.5V	D504	8300496	**209**	ZPD 7.5V
R515	5020099		86.6 kΩ 1% 1/4W	R517	5020923		2.26 kΩ 1% 1/4W
R516	5020203		2.67 kΩ 1% 1/4W	R518	5020770		4.42 kΩ 1% 1/4W
C501-502	4000137		47 pF 5% 63V	C505	4130309		330 nF 10% 63V
				C506	4200847		2.2 µF 20% 50V
C504	4000137		47 pF 5% 63V				
S501	7400371		Switch	S502	7400372		Switch
P502	7220700		Plug 8 pole	P503	7220134		Plug 2/2 pole

PCB 6, 8001041 Input Socket

IC601	8340996	**138**	LM 1458				
TR601	8320615	**51**	BC 848B				
R602	5011733		523 kΩ 1% 1/8W	R608	5011732		475 kΩ 1% 1/8W
R605, 606	5011732		475 kΩ 1% 1/8W				
C601-602	4010176		10 nF -20+80% 50V				
P601-602	7210695		DIN-socket 8 pole	P604	7210306		Phonosocket
				P605	7210521		Loudspeakersocket 4 pole
P603	7220702		Plug 9 pole				

PCB 7, 8001038 NTC

R701	5220036	NTC 330 kΩ 10% 1/2W	

PCB 8, 8013445 Transformer

D801-802	8300023	**209**	1N 4002
C801	4200677		470 µF -10+50% 6.3V
	7530101		Contact pin
TF1	6609034		Thermofuse
	6609024		Thermofuse only f/Canada

PCB 9, 8001067 Stand by

D901	8330001	**206**	CQV 10-5 LED red
R903	5210006		LDR 3.3 kΩ 33%

PCB 10, 8330243 Display

PCB 11, 8006030 Crossover Network

R1	5100368		22 Ω 5% 6W	R3	5100349		15 Ω 5% 3W
R2	5100350		4.7 Ω 5% 3W				
C1	4200679		15 µF 10% 35V	C4	4130426		0.33 µF 5% 100V
C2	4200857		10 µF 10% 35V	C5	4130425		3.3 µF 5% 100V
C3	4130425		3.3 µF 5% 100V				
S1	6609027		PTC switch				
	7500124		Contact pin				
90L3	6850186		Coil 6.8 mH				

△indicates that static electricity may destroy the component

3-2

Standard Resistors:
Resistors 5% 1/4 W

	x1	x10	x100	x1K	x10K	x100K	x1M	x10M
1.0	5010592	5010506	5010065	5010040	5010039	5010049	5010054	5010838
1.2		5010595	5010128	5010153	5010048	5010047	5010665	
1.5	5011348	5010468	5010057	5010247	5010053	5010063	5010743	
1.8		5010822	5010362	5010066	5010135	5010072	5010791	
2.2	5010682	5010448	5010092	5010064	5010079	5010120	5010745	
2.7	5010925	5010403	5010000	5010298	5010141	5010083	5010431	
3.3		5010253	5010044	5010076	5010075	5010117	5010848	
3.9	5011377	5010822	5010070	5010069	5010060	5010073	5010714	
4.7	5010888	5010411	5010058	5010048	5010045	5010077	5011513	
5.6	5010706	5010151	5010067	5010041	5010061	5010071	5010658	
6.8	5010904	5010039	5010144	5010052	5010062	5010074		
8.2	5010880	5010056	5010068	5010154	5010091	5010505		

Resistors 5% 1/8 W

	x1	x10	x100	x1K	x10K	x100K	x1M	x10M
1.0		5011464	5011357	5010816	5010935	5011440	5011459	5020875
1.2		5011351	5011084	5011442	5011338	5011341	5011175	
1.5		5011463	5011443	5011178	5011364	5011398	5011460	
1.8			5011350	5011361	5011344	5011468		
2.2	5011032	5011376	5010886	5011353	5010833	5011360	5011342	
2.7		5011471	5011355	5011362	5011366	5011370	5011478	
3.3			5011337	5010827	5011340	5011371	5011462	
3.9		5011438		5011157	5011457	5011372	5020876	
4.7	5011363	5011036	5011441	5011363	5010937	5011343	5011611	
5.6		5011412	5011358	5010885	5011166	5011340		
6.8		5011356	5011336	5010839	5011367	5011458		
8.2		5011466	5011354	5011339	5011368	5011373		

Resistors SMD 2% 1/8 W
SMD 5% 1/8 W

	5%	2%	2%	2%	2%	2%	5%	5%
	x1	x10	x100	x1K	x10K	x100K	x1M	x10M
1.0	5011623	5011647	5011218	5011227	5011241	5011256	5011267	5011730
1.1	5011624	5011648	5011666	5011681	5011689	5011694	5011707	
1.2	5011625	5011649	5011219	5011682	5011490	5011257	5011708	
1.3	5011626	5011650	5011670	5011683	5011242	5011258	5011709	
1.5	5011627	5011651	5011220	5011228	5011243	5011259	5011710	
1.6	5011628	5011652	5011671	5011684	5011690	5011695	5011711	
1.8	5011629	5011653	5011672	5011229	5011244	5011260	5011712	
2.0	5011630	5011654	5011673	5011685	5011691	5011696	5011713	
2.2	5011216	5011655	5011674	5011230	5011245	5011261	5011714	
2.4	5011634	5011656	5011675	5011686	5011246	5011697	5011715	
2.7	5011635	5011657	5011497	5011231	5011247	5011262	5011716	
3.0	5011731	5011658	5011499	5011500	5011692	5011698	5011717	
3.3	5011217	5011659	5011676	5011232	5011248	5011263	5011718	
3.6	5011636	5011660	5011677	5011687	5011249	5011264	5011719	
3.9	5011637	5011661	5011221	5011233	5011491	5011699	5011720	
4.3	5011638	5011662	5011498	5011688	5011492	5011700	5011721	
4.7	5011639	5011269	5011222	5011234	5011250	5011265	5011722	
5.1	5011640	5011663	5011678	5011235	5011493	5011701	5011723	
5.6	5011641	5011664	5011223	5011236	5011251	5011702	5011724	
6.2	5011642	5011665	5011224	5011237	5011693	5011703	5011725	
6.8	5011643	5011666	5011225	5011238	5011252	5011704	5011726	
7.5	5011644	5011667	5011679	5011239	5011253	5011705	5011727	
8.2	5011645	5011279	5011226	5011240	5011254	5011266	5011728	
9.1	5011646	5011668	5011680	5011489	5011255	5011706	5011729	

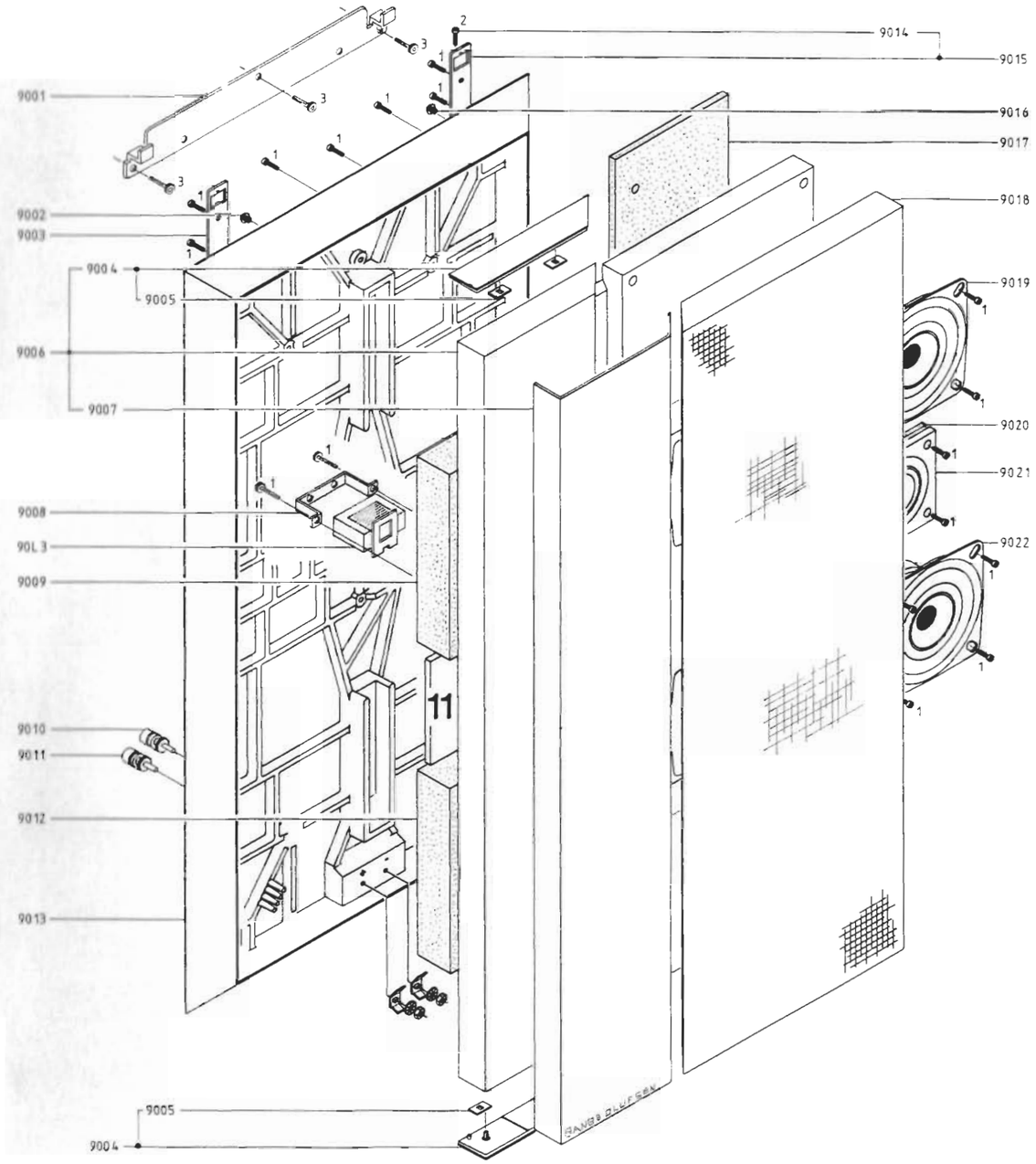
(Glue dots, approx. 200, part no. 3181932).

4-1

LIST OF MECHANICAL PARTS

Beovox/Beolab 5000

The illustration shows the left loudspeaker



4-1

Beovox/Beolab 5000

11 Modul	8006030	Crossover Network
9001	3031198	Wall bracket
9002	3035032	Rubber foot
9003	3031199	Fitting
9004	3456184	End pieces, top-bottom
9005	2395019	Spring leaf
9006	3440113	Baffle w/cover and end pieces, left
	3440112	Baffle w/cover and end pieces, right
9007	3302454	Cover, left
	3302451	Cover, right
9008	2510151	Clamp
9009	3922042	Damping material
9010	7210596	Terminal screw, black
9011	7210595	Terminal screw, red
9012	3922042	Damping material
9013	3430419	Cabinet
9014	2042036	Screw 4x16 mm
9015	3031199	Fitting w/screw
9016	3035032	Rubber foot
9017	3922033	Damping material
9018	3450792	Cloth front, blue
	3450916	Cloth front, grey
	2391083	Locking piece, rubber
9019	8480211	Woofer 5"
9020	3340051	Packing
9021	8480209	Tweeter 1"
9022	8480211	Woofer 5"
90L3	6850186	Coil 6.8 mH
	6276089	Wires, assembled

Survey of screws

1	2019018	Screw 4x16 mm
2	2042036	Screw 4x16 mm
3	2018000	Screw 4.2x25 mm
	3390373	Bag w/screws and Rawlplugs

Beovox/Beolab 3000

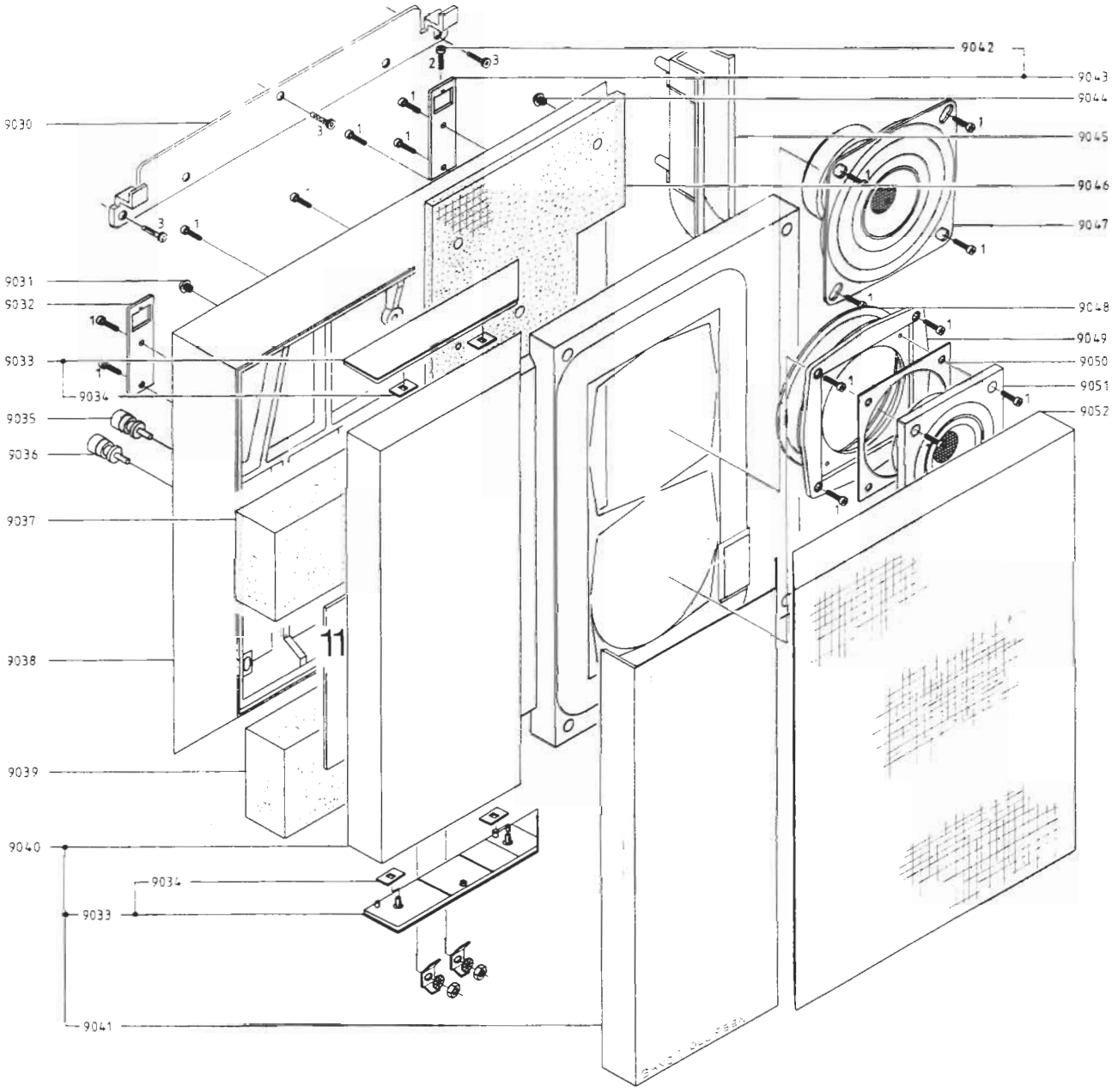
11 Modul	8006030	Crossover Network
9030	3031198	Wall bracket
9031	3035032	Rubber foot
9032	3031199	Fitting
9033	3456184	End pieces, top-bottom
9034	2395019	Spring leaf
9035	7210596	Terminal screw, black
9036	7210595	Terminal screw, red
9037	3922041	Damping material
9038	3430420	Cabinet
9039	3922041	Damping material
9040	3440115	Baffle w/cover and end pieces, left
	3440114	Baffle w/cover and end pieces, right
9041	3302455	Cover, left
	3302452	Cover, right
9042	2042036	Screw 4x16 mm
9043	3031199	Fitting w/screw
9044	3035032	Rubber foot
9045	3458646	Woofer port
9046	3922033	Damping material
9047	8480210	Woofer 5"
9048	3340076	Packing
9049	3014083	Adaptor
9050	3340051	Packing
9051	8480209	Tweeter 1"
9052	3450793	Cloth front, blue
	3450915	Cloth front, grey
	2391083	Locking piece, rubber
	6276088	Wires, assembled

Survey of screws

1	2019018	Screw 4x16 mm
2	2042036	Screw 4x16 mm
3	2018000	Screw 4.2x25 mm
	3390373	Bag w/screws and Rawlplugs

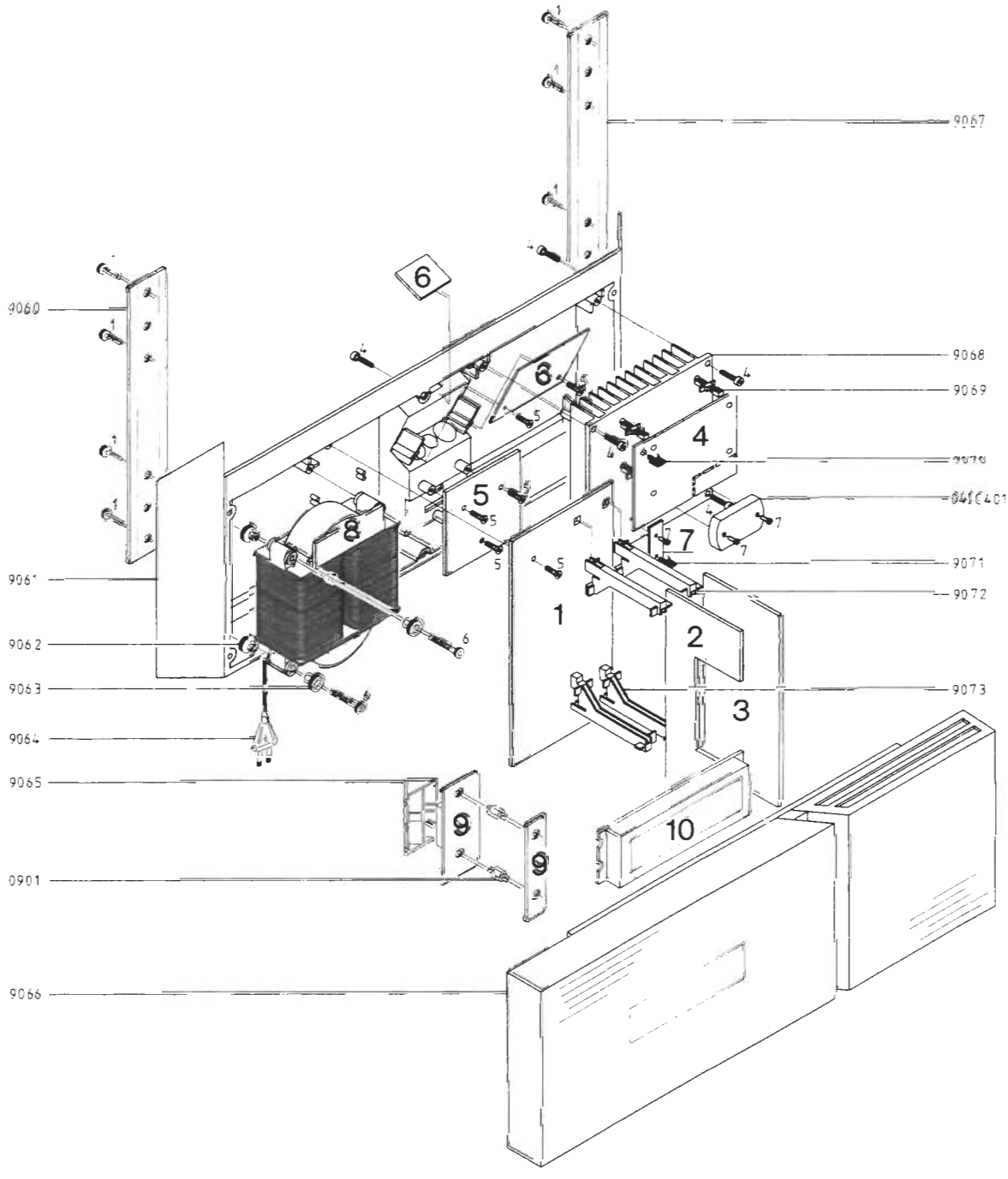
Beovox/Beolab 3000

The illustration shows the left loudspeaker



Power Amplifier

The illustration shows the right Power Amplifier



Power Amplifier

01Modul	8001037	PCB1, Power Supply
02Modul	8001033	PCB2, System Control
03Modul	8001032	PCB3, Microprocessor
04Modul	8001034	PCB4, Output Amplifier
04IC401	8350059	STK 4042V
05Modul	8001039	PCB5, Switch
06Modul	8001041	PCB6, Input Socket
07Modul	8001038	PCB7, NTC
08Modul	8013445	PCB8, Transformer
09Modul	8001067	PCB9, Stand-by
0901	3152537	Spacer
10Modul	8330243	PCB10, Display

9060	3031197	Fitting
9061	3452626	Rear part, right
	3452627	Rear part, left
9062	2938154	Bushing
9063	2938154	Bushing
9064	6270425	Mains cable type 6701-02-11-12
	6270424	Mains cable type 6703-13
	6270423	Mains cable type 6704-14
	6270426	Mains cable type 6705-15
9065	2776150	Switch cover, right
	2776151	Switch cover, left
9066	3458698	Front panel, assembled
9067	3031197	Fitting
9068	3358239	Heat sink
9069	3152638	Spacer
9070	3152561	Cable holder
9071	3152561	Cable holder
9072	3152254	Holder f/PCB
9073	3152254	Holder f/PCB

To P302	6275985	Wire bundle
To P407	6275872	Wire bundle
To P408	6275879	Wire bundle
To P502	6275871	Wire bundle
To P503	6275892	Wire bundle
To P603	6275870	Wire bundle

Survey of screws

1	2019018	Screw 4x16 mm
4	2015133	Screw 3.5x16 mm
5	2015134	Screw 3.5x10 mm
6	2015135	Screw 3.5x30 mm
7	2013157	Screw 2.9x16 mm

PACKING

Beovox 3000

3397672	Foam end pieces, top
3397672	Foam end pieces, bottom
3390363	Foam foil
3397059	Outer carton

Beolab 3000

3397672	Foam end pieces, top
3397672	Foam end pieces, bottom
3390362	Foam foil
3392058	Outer carton

Beovox 5000

3397672	Foam end pieces, top
3397672	Foam end pieces, bottom
3397671	Middle section, top-bottom
3397692	Foam insert
3392104	Cardboard insert
3390361	Foam foil
3392057	Outer carton

Beolab 5000

3397672	Foam end pieces, top
3397672	Foam end pieces, bottom
3397671	Middle section, top-bottom
3392104	Cardboard insert
3390360	Foam foil
3392056	Outer carton

OWNER's MANUALS

Beovox 3000/5000

3506155	Danish
3506156	Swedish
3506157	Finnish
3506158	English
3506159	German
3506160	Dutch
3506161	French
3506162	Italian
3506163	Spanish

Beolab 3000/5000

3506135	Danish
3506136	Swedish
3506137	Finnish
3506138	English
3506139	German
3506140	Dutch
3506141	French
3506143	Italian
3506144	Spanish

ACCESSORIES

6270167	2-pin DIN speaker cable – 5 m
6270336	4-pin DIN shielded speaker cable – 5 m
6270352	4-pin DIN shielded speaker cable – 10 m
6270417	8-pin DIN Power Link cable – 2.5 m
6270418	8-pin DIN Power Link cable – 5 m
6270419	8-pin DIN Power Link cable – 10 m
6270350	2-pin DIN shielded speaker cable – 5 m
8960318	BLC 150, blue line cord
8960329	GLC 150, grey line cord
7229075	Adaptor for Power Link – 8-pin DIN female/8-pin DIN female
8960280	Cable Cover 5000 metal finish – 0.85 m
8960290	Cable Cover 3000 metal finish – 1.30 m
2560232	Plastic cable cover 8x18 mm – 2.10 m
2560202	Plastic cable cover 10x46 mm – 2.10 m

JUSTERING

Display

DC voltmeter tilsluttes ben 5 på stik P301.
Med 1R120 justeres til 1,9 V ±0,1 V.

ADJUSTMENT

Display

Connect DC voltmeter to pin 5 on plug P301.
Adjust with 1R120 to 1.9 V ±0.1 V.

REPARATIONSTIPS

Sådan sættes omskifterne i den rigtige stilling
Nederst på bagsiden af Beolab 3000/5000 er der to knapper:

Indgangseffekt-knappen (den største af de to med 4 indstillingsmuligheder).

Mode-knappen (den mindste af de to med 3 indstillingsmuligheder).

Indgangseffekt-knappen
Sæt indgangseffekt-knappen i en stilling, der passer til radioens eller TV'ets udgangseffekt.

POWER LINK STIKDÅSE
Hvis Beolab 3000/5000 er tilsluttet via POWER LINK stikdåsen, er det lige meget, hvilken stilling indgangseffekt-knappen står i, da højttalerens lydniveau ikke påvirkes af knappens stilling.

SPEAKER LINK STIKDÅSE

Knappens stilling	Radioens/TV'ets udgangseffekt	
	4 ohm	8 ohm
—	-40 W	-20 W
=	40-80 W	20-40 W
≡	80- W	40- W

LINE IN STIKDÅSE
Sæt knappen i stilling N.

Mode-knappen
Når Beolab 3000/5000 er tilsluttet lysnettet, er den i stand-by-stilling. Stand-by-stillingen indikeres af et lille rødt lys ved siden af displayet.
Højttaleren tændes automatisk, når den modtager et signal, med mindre AUDIO/VIDEO/OFF-knappen står i stilling OFF.

Sæt mode-knappen i stilling A, R (højre) eller L (venstre):

Stikdåse	Mode-knappen	
LINE IN	A	
SPEAKER LINK	A	
POWER LINK	L	Venstre højttaler
	R	Højre højttaler

Når det TV/den radio, som Beolab 3000/5000 er tilsluttet, går i stand-by, slukkes højttaleren automatisk – d.v.s. den går også i stand-by. Dette sker øjeblikkelig, hvis højttaleren er tilsluttet ved hjælp af et Power Link kabel eller en skærmet 4-polet DIN højttalerledning. I alle andre tilfælde går Beolab 3000/5000 i stand-by efter ca. 3 minutter.

REPAIR TIPS

Setting the switches on the rear
On the lower rear side of the Beolab 3000/5000 there are two switches:

The input level switch (the longer of the two – 4 settings),

The mode switch (the shorter of the two – 3 settings).

Input level switch
Set the input level switch to the position required to match the output of receiver or TV set.

POWER LINK SOCKET
If you have connected a Beolab 3000/5000 via the POWER LINK socket, there are no requirements as to the setting of the input level switch, because the acoustic level is independent of the setting of the switch.

SPEAKER LINK SOCKET

Switch position	Receiver/TV output	
	4 ohm	8 ohm
—	-40 W	-20 W
=	40-80 W	20-40 W
≡	80- W	40- W

LINE IN SOCKET
Set the switch to N.

Mode switch
Once connected to the mains supply, the Beolab 3000/5000 is in the stand-by mode. The stand-by mode is indicated by a red light next to the display. The speaker switches on automatically when it receives a signal, unless, of course the AUDIO/VIDEO/OFF switch is set to OFF.

Set the mode switch to either A, R (Right) or L (Left):

Sockets	Mode switch	
LINE IN	A	
SPEAKER LINK	A	
POWER LINK	L	Left speaker
	R	Right speaker

When the TV set/receiver to which the Beolab 3000/5000 is connected goes into stand-by, the loudspeaker automatically switches itself off – i.e. reverts to the stand-by mode. This happens instantly if you have connected the speaker using a Power Link cable or a screened 4-pin DIN speaker cable. In all other cases the Beolab 3000/5000 goes into stand-by after a delay of approx. 3 minutes.

AUDIO/VIDEO/OFF-omskifter
For at opnå den rigtige status-udlæsning i displayet på højttaleren, skal AUDIO/VIDEO/OFF-omskifteren sættes i den rigtige stilling:

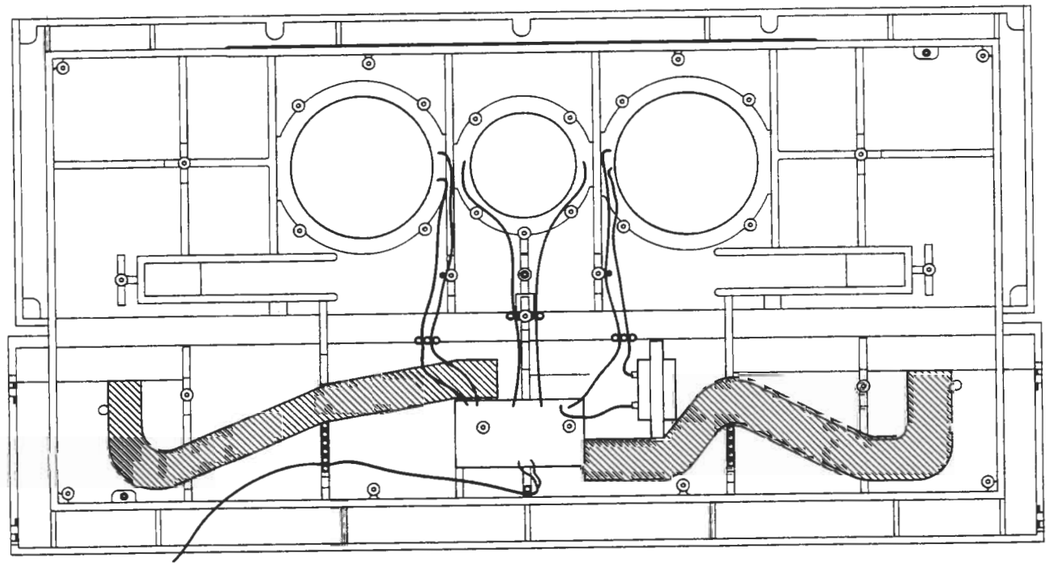
AUDIO	hvis Beolab 3000/5000 er tilsluttet en Beomaster, et Beocenter eller en MCL 2 A/2 AV.
VIDEO	hvis Beolab 3000/5000 er tilsluttet et Beovision.
OFF	slukket.

AUDIO/VIDEO/OFF switch
In order to obtain the right status reading from the display, the AUDIO/VIDEO/OFF switch must be set to the correct position:

AUDIO	if the Beolab 3000/5000 is connected to a Beomaster, Beocenter or MCL 2 A/2 AV.
VIDEO	if the Beolab 3000/5000 is connected to a Beovision.
OFF	off position.

Placering af dæmpemateriale og ledningsføring

Placement of damping material and wiring



Diskanthøjttaler
NB! Vær opmærksom på at diskanthøjttaleren let kan beskadiges, hvis højttaleren placeres med fronten nedad uden at stoframmen er monteret.

Tweeter
NB! Please note that the tweeter may easily be damaged, if you place the speaker with the front facing downwards and without the cloth front being fitted.

ISOLATIONSTEST

Ethvert apparat skal isolationstestes, efter at det har været adskilt. Testen udføres, når apparatet er samlet igen og er klar til udlevering til kunden.

Der må ikke forekomme overslag under testen!

Isolationstesten udføres på følgende måde:

De to stikben på netstikket kortsluttes og tilsluttes den ene af terminalerne på isolationstesteren. Den anden terminal tilsluttes stel på phono bøsningen (LINE IN).

OBS!
For at undgå beskadigelser af apparatet er det vigtigt, at begge terminaler på isolationstesteren har virkelig god kontakt.

Spændingsreguleringen på isolationstesteren drejes langsomt op, indtil en spænding på 1,5-2 kV er opnået. Her skal den holdes i ét sekund, hvorefter der langsomt drejes ned for spændingen igen.

INSULATION TEST

Each set must be insulation tested after having been dismantled. Make the test when the set has been reassembled and is ready to be returned to the customer.

Flashovers must not occur during the testing procedure!

Make the insulation test as follows:

Short-circuit the two pins of the mains plug and connect them to one of the terminals of the insulation tester. Connect the other terminal to ground in phono socket (LINE IN).

NOTE!
To avoid damaging the set it is essential that both terminals of the insulation tester have good contact.

Slowly turn the voltage control of the insulation tester until a voltage of 1.5-2 kV is obtained. Maintain that voltage for one second, then slowly turn it down again.

Bang&Olufsen

Beolab 4500

Type 6721, 6722, 6723, 6724, 6725

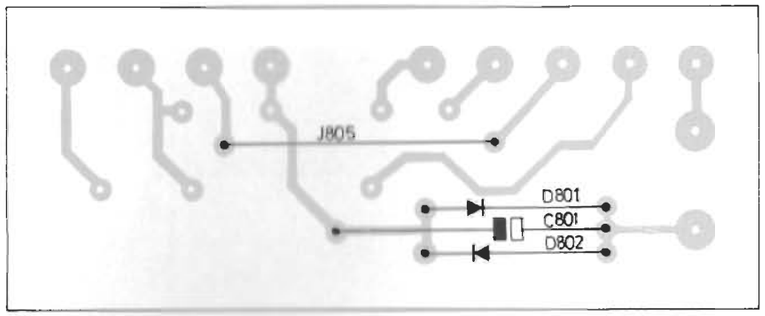
09-91 3538793 Indklæbes i serviceanvisningen Beovox 5 (3538717)
Paste into service manual Beovox 5 (3538717)

Technical specifications

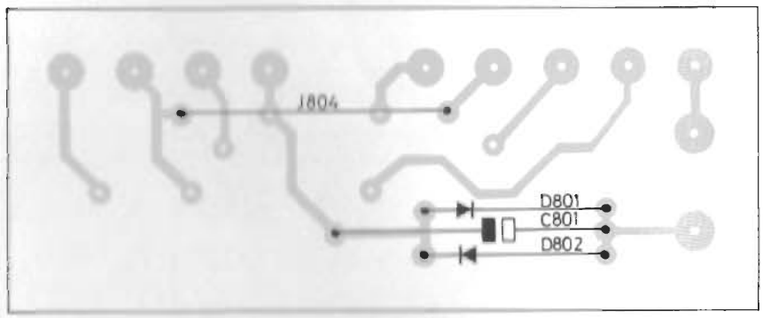
Se side 1-2 under Beolab 3000
See page 1-2 for Beolab 3000

Wiring of Mains Transformer

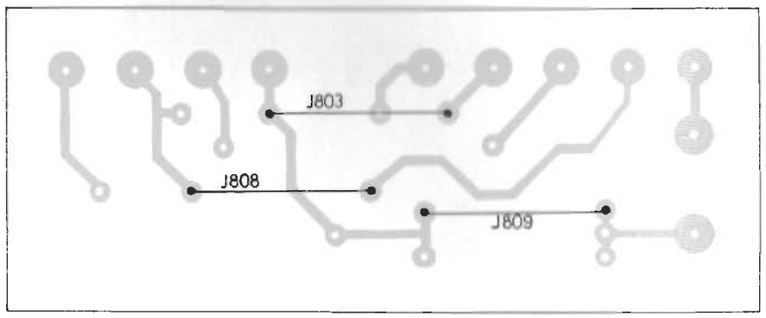
230V
Type 6721



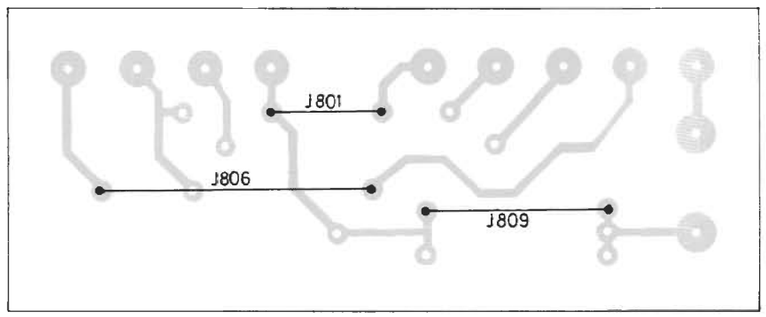
240V
Type 6722 (GB)
Type 6725 (AUS)



120V
Type 6723 (US)



100V
Type 6724 (JAP)



DIAGRAMFORKLARING
På diagrammerne er der angivet typenumre på transistorer og IC'er. Hvis positionsnummeret er efterfulgt af en stjerne, skal reservedelsnummeret altid benyttes, da denne komponent er specielt udvalgt, f.eks. TR102*.

Styrekredsløb
I visse styrekredsløb er den aktive tilstand angivet med en funktions- eller bogstavsangivelse. Denne kan eksempelvis være $\overline{\text{ST.BY.}}$ = »low« i stand-by-stilling eller ST.BY. = »high« i stand-by-stilling.

Forsyningsspændinger
Alle forsyningsspændinger i diagrammerne er angivet med en pil og en spændingsangivelse.

Eksempel:
Ved siden af spændingsangivelsen står der f.eks. 7 CON. Dette betyder, at den pågældende forsyningsspænding går til 7 steder på den pågældende diagramside (7 CON. = 7 connections).

EXPLANATION OF DIAGRAM
Type numbers of transistors and ICs are indicated on the diagrams.
If the position number is followed by an asterisk the spare part number must always be used because the component in question has been specially selected, e.g. TR102*.

Control Circuit
In certain control circuits the active mode is indicated by a function term or by an abbreviation. This may be e.g. $\overline{\text{ST.BY.}}$ = low in the stand-by mode or ST.BY. = high in the stand-by mode.

Supply Voltages
All supply voltages in the diagrams are indicated by an arrow and a voltage indication.

Example:
"7 CON.". This means that the supply voltage in question goes to 7 different places on the diagram page in question (7 CON = 7 connections).

SYMBOL FOR SIKKERHEDSKOMPONENTER

Ved udskiftning af komponenter med dette symbol skal der anvendes komponenter med samme reservedelsnummer. Den nye komponent skal monteres på samme måde som den udskiftede.

SYMBOL OF SAFETY COMPONENTS

When replacing components with this symbol, components with identical part numbers must be used. The new component must be mounted in the same way as the one replaced.

MÅLEBETINGELSER
Alle DC-spændinger er målt i forhold til stel med et voltmeter med en indgangsmodstand på 10 Mohm.

DC-spændingerne er opgivet i volt (V), f.eks. 0,7 V.

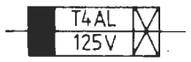
MEASURING CONDITIONS
All DC voltages have been measured in relation to ground with a voltmeter with an input resistance of 10 Mohms.

The DC voltages are stated in volts (V), e.g. 0.7 V.

EXPLANATION DE SYMBOLES DU FUSIBLE UTILISES DANS L'APPAREIL

Remplacer par un fusible retardé de la même type et de 4 ampères 125 volts.

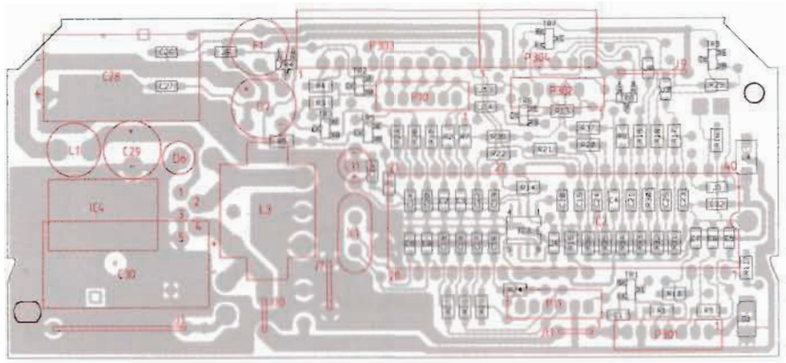
EXPLANATION OF THE FUSE SYMBOLS USED IN THE SET



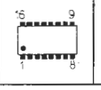
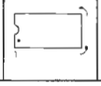
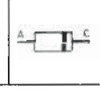
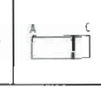
Replace with the same type of 4 amperes 125 volts slow acting fuse.

10-1

PCB3, Microprocessor



LIST OF ELECTRICAL PARTS

51	122	136	156	209	250		
							

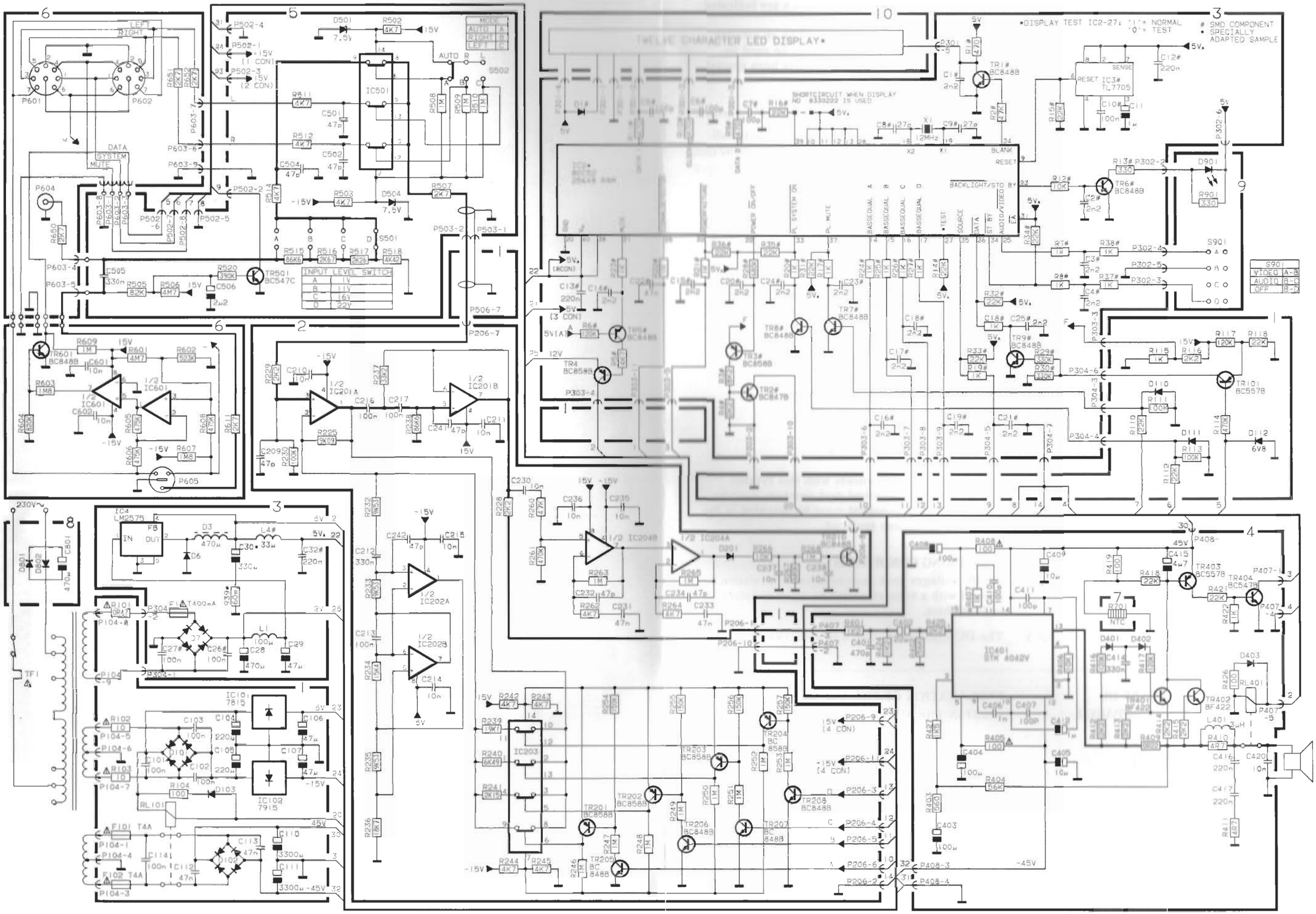
Resistors not referred to are standard, see page 3-2
△ Indicates that static electricity may destroy the component
* Specially selected or adapted sample

PCB3, 800/524
Microprocessor

IC2*Ω	8341771 **136**	µP 80C52	IC4	8341770 **122**	LM2575-50
IC3	8341612 **156**	TL7705			
TR1	8320615 **051**	BC848B	TR5-	8320615 **051**	BC848B
TR2	8320755 **051**	BC847B	TR9		
TR3-	8320616 **051**	BC858B			
TR4					
D1	8300557 **250**	BYM10	D7	8300466	125V 1.5A
D6	8300795 **209**	1N5822			
R39*	5012142	60MΩ			
C1-	4010132	1nF 10% 50V	C14-	4000370	2.2nF 5% 50V
C2			C21		
C3-	4000370	2.2nF 5% 50V	C22	4010209	47nF 10% 50V
C4			C23-	4000370	2.2nF 5% 50V
C5-	4000241	100pF 5% 50V	C25		
C7			C26-	4010166	100nF -20+80% 50V
C8-	4000278	27pF 5% 50V	C27		
C9			C29	4200952	47µF -20+50% 25V
C10	4010166	100nF -20+80% 50V	C30	4201116	330µF 20% **25V**
C11	4200512	1µF 20% **50V**	C31	4200974	6.8µF 20% **6.3V**
C12-	4000287	220nF -20+80% 25V	C32	4000287	220nF -20+80% 25V
C13					
L1	8020912	Coil 100µH 10%	L4	8020599	Coil 10µH
L3	8020914	Coil 470µH			
F1	6600096	Fuse 400mAT			
X1	8090075	Crystal 12MHz			
P301	7220714	Plug 7 pole	P303	7210110	Socket 11 pole
P302	7220713	Plug 6 pole	P304	7210274	Socket 7 pole

All other electrical parts are identical with Beolab 3000

DIAGRAM


TWELVE CHARACTER LED DISPLAY
•DISPLAY TEST IC2-27: '1'= NORMAL '0'= TEST
SMD COMPONENT
• SPECIALLY ADAPTED SAMPLE
SHORTCIRCUIT WHEN DISPLAY NO 8330222 IS USED
IC401 STK 4042V
IC501
IC4 LM2575
IC101 7815
IC102 7915
IC201A
IC201B
IC202A
IC202B
IC203
IC204A
IC204B
IC3# TL7705
P601
P602
P604
P605
P206-7
P303-4
P304-1
P304-6
P304-4
P304-3
P302-6
P302-2
P302-4
P302-5
P302-3
P408-
P408-3
P408-4
P206-9
P206-11
P206-3
P206-4
P206-5
P206-6
P206-2
P206-10
P407-1
P407-4
P407-2
P407-3
P407-5
P503-2
P503-1
P506-7
P502-4
P502-1
P502-3
P502-2
P502-6
P502-7
P502-8
P502-5
P603-7
P603-6
P603-9
P603-8
P603-3
P603-4
P603-5
P304-2
P304-1
P104-8
P104-5
P104-6
P104-7
P104-1
P104-4
P104-3
S501
S502
S901
S901
VIDEO A-B
AUDIO B-C
OFF B-C
INPUT LEVEL SWITCH
A 1V
B 11V
C 16V
D 22V
MODE
AUTO A
RIGHT B
LEFT C
DATA
SYSTEM
MUTE
LEFT
RIGHT
AUTO
SENSE
RESET
BLANK
BACKLIGHT/STO
AUDIO/VIDEO
SOURCE
DATA
ST BY
TEST
POWER ON/OFF
PL SYSTEM ON
PL MUTE
BASSEQUAL A
BASSEQUAL B
BASSEQUAL C
BASSEQUAL D
TR1# BC848B
TR2# BC847B
TR3# BC858B
TR4 BC858B
TR6# BC848B
TR7# BC848B
TR8# BC848B
TR9# BC848B
TR101 BC557B
TR201 BC858B
TR202 BC858B
TR203 BC858B
TR204 BC 858B
TR205 BC 848B
TR206 BC848B
TR207 BC 848B
TR208 BC848B
TR401 BF422
TR402 BF422
TR403 BC557B
TR404 BC547B
TR501 BC547C
D501
D504
D901
D101
D111
D112
6V8
D201
D202
D401
D402
D403
D801
D802
D10
D102
D103
RL101
RL401
F1 T400mA
F101 T4A
F102 T4A
TF1
230V~
NTC
X1 12MHz
X2
5V
15V
-15V
45V
-45V